

WHAT IS CLAIMED IS:

1. An apparatus for forming a beam in a base station, comprising:
 - a plurality of channel cards for processing and outputting signals to be
5 transmitted to each channel;
 - a signal synthesizer/distributor for synthesizing the signals from the channel
cards and compensating phases of the signals;
 - at least one channel controller for controlling beams of the signals from the
signal synthesizer/distributor according to a demand of a mobile communication
10 terminal, and outputting the controlled beam signals;
 - at least one middle frequency generating block for receiving the signals from the
at least one channel controller and synthesizing the signals in each frequency to generate
middle frequency signals;
 - at least one transmitter for converting the middle frequency signals received from
15 the at least one middle frequency generating block into signals in a transmitting band;
 - an RFB for amplifying the signals from the at least one transmitter into signals in
an output band and controlling phases of transmitting and receiving signals; and
 - an antenna connection block for switching the amplified signals to corresponding
antennas of the RFB so that beams can be generated.
2. An apparatus for forming a beam in a base station, comprising:
 - a plurality of transmitters for transmitting signals, the signals being controlled in
beam form according to the number of users in the base station;
 - a coupling block for receiving the signals from the transmitters and transmitting
25 the received signals to an antenna side;
 - a switching controlling block for receiving the signals from the coupling block
and switching the received signals according to the controlled results to output the
switched signals;
 - an amplifying block for amplifying the signals from said switching controlling
30 block in a certain level and outputting the amplified signals; and
 - a plurality of matrix buffers for receiving the signals from the amplifying block
and switching the received signals to antennas to control beam shapes.